DOCUMENT RESUME

ED 239 138 CG 017 182

AUTHOR Weinstein, Alan G.; Gent, Michael J.
TITLE Managerial Power and Worker Performance: A Longitudinal and Cross-Sectional Study.
PUB DATE [Aug 83]
NOTE 22p.; Paper presented at the Annual Convention of the American Psychological Association (91st, Anaheim, CA, August 26-30, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Administrators; Attribution Theory; *Employer Employee Relationship; Government Employees; *Job Performance; Longitudinal Studies; Motivation; *Power Structure; *Predictor Variables; *Work Environment

ABSTRACT

The relationship between managerial social power and subordinate job performance has produced mixed empirical results. To investigate the relationship between employees' performance and their perception of managers' social power under favorable and unfavorable climate conditions, an average of 135 city government employees completed two series of questionnaires at 1-month intervals and after an interval of six months. On the first administration, 33 managers and 109 employees completed the questionnaires; during the second administration, 30 managers and 87 employees completed the questionnaires. Employees completed the Bases of Managerial Power Questionnaire and subsections of the Psychological Climate Questionnaire, while managers completed the Rated Employee Performance. An analysis of the results showed that relationships between managerial power and employee performance were positive and stronger under poor job climate conditions. When perceived job climate was favorable, power did not predict performance. Longitudinal results, from data taken at the 6-month interval, demonstrated improved prediction, supporting the hypothesis that attributed social power needs time to be effective. (Author/BL)

Managerial Power and Worker Performance: A Longitudinal and Cross-Sectional Study

Alan G. Weinstein*

and

Michael J. Gent

Department of Management
Canisius College
Buffalo, N.Y. 14208

*First authorship is coequal. Order was randomly determined.

ABSTRACT

A moderated subgroup design was used to study the relationship between employee performance and manager's attributed social power under favorable and unfavorable climate conditions. It was hypothesized and demonstrated that when perceived climate was favorable, power did not predict performance. When perceived climate was unfavorable, power was positively related to performance in most cases. Lagged correlations over six months demonstrated improved prediction, particularly in the low perceived challenge and variety subgroup.

Although the number of statistically significant findings were limited, largely due to small sample sizes, consistency in the direction of differences between correlations supports the hypothesis that poor climates yield stronger power-performance relationships.

Managerial Power and Worker Performance: A Longitudi[illegible]d Cross-sectional Study

The study of leadership represents a large investment by industrial-organizational psychologists. Yet, many investigators of the leadership process have ignored the framework in which the motivational basis of leadership can be studied through attributed social power. The attributed social power of a leader is defined as a follower's perception of the motivational forces exerted on the follower by the leader. It is proposed that the follower's perception of this power rather than the actual or potential power of the leader is more relevant to the performance of the follower.

The perceived motivational forces elicited by managers or their attributed social power is derived from resources granted by the organization and those unique to the individual. These resources serve as the bases of the manager's attributed social power. French and Raven (1959) provided a particularly useful classification of the bases of power, that includes: reward power--based on the perception that another person has the ability to mediate rewards; coercive power--based on the perception that another person has the ability to mediate punishments; legitimate power--based on

the perception that another person has the right to prescribe behavior; referent power--based on the identification with another person; and expert power--based on the perception that another person possesses special knowledge or expertise.

Previous field studies have focused on the relationship between managerial social power and subordinate job performance (Bachman et al., 1966, 1968; Student, 1968; Warren, 1968; and Ivancevich and Donnelly, 1970). In general, positive relationships have been observed for reward, referent and expert power with subordinate performance; while non-significant results are reported for the relationship of legitimate power with subordinate performance, and mixed results were found for the relationship of coercive power with performance.

A direct relationship between the bases of social power and performance is consistent with other major theoretical positions based on social power (Katz and Kahn, 1966). However, Weinstein and Holzbach (1976) demonstrated the power-performance relationship to be more complex than originally expected. Specifically, when climate was positive, supportive and encouraging, the relationship between power and performance was weak and not significant. However, when climate was characterized by red tape, discouragement and lack of initiative, the power-performance relationship was statistically significant in the predicted direction.

Initially, this finding was somewhat puzzling. Why should power be more influential when the organization is perceived negatively? One possible reason is as follows: when the organization is perceived positively, workers are likely to respond by self-directed effort to perform well. Thus, average performance will be higher and within-individual variance lower. But, when climate is poor, performance will drop. Influence, then, will be needed to overcome obstacles to high performance. Recasting this conceptual framework in a simple analogy, a ship in calm waters is likely to make progress whoever the captain is. But in a stormy sea, the caliber of leadership will be tested and the ship's performance will be greatly determined by the captain's influence.

The bases of this influence is more difficult to predict. Clearly, the incrimental power bases of expert and referent should correspond to this framework. Reward power should also fit but coercive power is more complex. Since the stress of a poor climate is likely to produce defensiveness and possibly aversion to coercive influence attempts, we would not expect to find the same relationship with coercive power. Legitimate power in general, has not been a good predicter of performance, and although we would expect the differential relationship to be present for legitimate power, we also expect that it will depend on the value attributed to authority and its acceptance.

The purpose of this study is to test the relationship between attributed managerial power and employee performance as moderated by climate. It is hypothesized that in poor climates the power-performance relationship will be strong for reward, expert, referent and legitimate power. In good climates, these relationships will be weak or non existant. No differential prediction is made for coercive power.

These hypotheses will be tested using a cross-sectional analysis for two time periods. They will also be tested over time, relating power at an earlier time to performance six months later. It is expected that the predicted relationship over time will be stronger than either static relationship. This is due largely to the time needed for attributed power to affect performance.

Method

Research Setting and Sample

Data were collected from non-supervisory employees and managers of a department of city government in a large northeastern city. Total employment in the department fluctuated around an average of about 135 people assigned to six administrative divisions. Job types represented in the unit were mostly white collar--administrative, professional/technical, clerical--however, one division employed a few outside construction workers and equipment operators.

Procedures

Questionnaires were administered to members of the

department in two phases. For both phases the researchers administered the questionnaires to members of the department in conference rooms at City Hall. During the first phase, three data-gathering sessions were held within a two-month period. Phase two data was collected six months later, in two sessions, three weeks apart. A six-month time interval was selected for two reasons: one, because the researchers felt that important changes in the variables of interest for this study would begin to manifest themselves after the passage of a half-year's time; two, six months marked a logistically convenient time for intruding in the department for the purpose of re-administering the questionnaire.

In both phases, some individuals who could not attend the group survey sessions completed the questionnaire privately and forwarded it to the researchers. All members of the department who participated were guaranteed that their individual privacy and confidentiality of responses would be protected. To insure this all questionnaires were coded and no individual identifying information was retained on the forms.

For phase one, 33 managerial questionnaires were prepared and 33 usables were returned; 117 employee questionnaires were prepared and 109 usables were returned (93%). During the second phase, 31 managerial questionnaires were prepared and 30 usables were returned; 99 employee questionnaires were prepared and 87 usables were returned (88%).

Between phase one and two, seven managers had changes in status: one retired; one was demoted; two were replaced; and three were replaced and demoted. Among the employees there were a number of terminations, most in one division among CETA workers whose contract had expired. One employee transferred to another division and two employees were promoted to manager.

Measures

From the employees' questionnaire: Bases of Managerial Power--Reward, coercive, legitimate, referent, and expert power were measured by the Attributed Power Index (Holzbach, 1974; Weinstein & Holzbach, 1976). This instrument provides measures of the five bases of power described by French and Raven (1959) with five, 5-item cc es. Responses to descriptive phrases were made on 7-point scales anchored by 1 = "extremely inaccurate" to 7 = "extremely accurate." Holzbach (1974) and Weinstein and Holzbach (1976) present detailed evidence supportive of the Index's validity and reliability.

Job Climate--Three composites from the James and Jones Psychological Climate Questionnaire were used in this study: Job challenge and variety (6 items), Role ambiguity (9 items), and Perceived participation (4 items). The items describe job-specific aspects of the work situation and were responded to on 5-point Likert Scales. The theoretical rationale underlying these measures of psychological climate

can be found in James & Jones (1974) and James, Hater, Gent, and Bruni (1978). The development of the questionnaire is detailed in Jones & James (1979) and James, Gent, Hater, & Coray (1979).

From the managerial questionnaire: Rated Employee Performance--Each employee in the sample was rated by his or her manager on items relating to various aspects of work done. These items, based on "mixed standard scale" methodology (Blanz & Ghiselli, 1972) were responded to using a three-point scale: "worse than," "equal to," and "better than." For this study, ratings on two items relating to timeliness and efficiency of work were averaged for each individual in the employee sample.

Results

A moderated sub-group analysis was used in order to test the hypothesized relationships between managerial power and employee performance under favorable and unfavorable job climate conditions. Median splits were made on each of the three job climate variables measured during phase one. The median values of the job climate moderators, as well as means, standard divisions and t-tests (two-tailed) for the power and performance variables within subgroups are presented in Table 1 for phase one, and in Table 2 for phase 2.*

Insert tables 1 and 2 about here

*Sample sizes vary due to missing data.

Both Table 1 and Table 2 show that in every case the means for all five power bases were higher in the high challenge and variety, low role ambiguity, and high perceived participation subgroups. These mean differences were significant in only five comparisons for phase one, and in only two comparisons for phase two. The trend is partially attributable to the power variables being correlated with the job climate moderators.

It should be noted that in this study low role ambiguity and high challenge and variety and high perceived participation are considered favorable job climate conditions. Opposite levels of these variables are considered unfavorable climate conditions.

Within the moderated subgroups, cross-sectional (static) and lagged (dynamic) zero-order correlations were computed between power variables and performance. The significance of the differences between the various coefficients were assessed using Fisher's Z-transformations. Tables 3 - 5 present results for static relationships for both phase one and phase two. Tables 6 - 8 present results for dynamic relationships. These tables do not include coefficients for the "Coercive" power variable. The reason for this omission is that virtually no consistant relationship between this variable and performance was predicted or found.

Insert tables 3 to 8 about here

Twelve out of 48 possible static correlations in Tables 3 - 5 were significant. Of those reaching significance, all were in unfavorable climate subgroups save one (expert power in the high challenge and variety subgroup in phase one). Tests for differences between coefficients in favorable vs. unfavorable climate subgroups, however, failed to reach statistical significance in all but one case. The direction of differences in correlations, whether significant or not, was as predicted in 19 out of 24 comparisons.

In Tables 6 - 9, five out of 24 dynamic correlations were significant, and all five were in unfavorable climate subgroups. The low job challenge and variety subgroup accounted for four of the five significant relationships. Two of the differences between subgroups were statistically significant. Of the 16 possible comparisons, 14 differences were in the predicted direction.

Discussion

The results of this study offer limited support for all hypotheses. Although the number of significant findings were fewer than expected, a very consistant pattern emerged. The differential relationships between managerial power and employee performance in both static and dynamic correlational analyses were largely in the predicted direction. That is, they were positive and stronger under

conditions of poor job climate.

A plausable reason for the fewer than expected significant correlations is the sample sizes of the subgroups, which were about 40 in each case. Also, some restriction of variance in the power variables was likely due to their being correlated with the climate moderators.

The significant findings for the logitudinal analyses provide support for the hypotheses that attributed social power needs time to be effective. At phase one data collection, the work units in the department were relatively new following the election of a new city administration. The six-month time interval, therefore, allowed for leadership to be felt by those individuals for whom the perceived job climate was unfavorable.

The dynamic and differential relationship between power and performance may explain why several studies have failed to demonstrate social power as an explanatory variable. Cross-sectional designs and effects of climate may mask the relationships between the bases of power and performance.

References

Bachman, J. G., Bowers, D. G., & Marcus, P. M. Bases of supervisory power: A comparitive study in five organizations. In A. S. Tannenbaum (Ed.) Control in organizations. New York: McGraw-Hill, 1968.

Bachman, J. G., Smith, C. G., & Slesinger, J. A. Control, performance, and satisfaction: An analysis of structural and individual effects. Journal of Personality and Social Psychology, 1966, 4, 127-136.

Blanz, F., & Ghiselli, E. E. The mixed standard scale: A new rating system. Personnel Psychology, 1972, 25, 185-199.

French, J. R. P. & Raven, B. The bases of social power. In D. Cartwright (Ed.), Studies in social power. Ann Arbor, MI: Institute for Social Research, 1959.

Holzbach, R. L. An investigation of a model for managerial effectiveness: The effects of leadership style and leader attributed social power on subordinate job performance. Unpublished Doctoral Dissertation, Carnegie-Mellon University, 1974.

Ivancevich, J. M., & Donnelly, J. H. Leader influence and performance. Personnel Psychology, 1970, 23, 539-549.

James, L. R., Gent, M. J., Hater, J. J., & Coray, K. E. Correlates of psychological influence: An illustration of the psychological climate approach to work environment perceptions. Personnel Psychology, 1979, 32, 563-588.

James, L. R., Hater, J. J., Gent, M. J., & Bruni, J. R. Psychological climate: Implications from cognitive social learning theory and interactional psychology. Personnel Psychology, 1978, 31, 783-813.

James, L. R., & Jones, A. P. Organization climate: A review of theory and research. Psychological Bulletin, 1974, 81, 1096-1112.

Jones, A. P., & James, L. R. Dimensions and relationships of individual and aggregated work environment perceptions. Organizational Behavior and Human Performances, 1979, 23, 201-250.

Katz, D., & Kahn, R. L. The social psychology of organizations. New York: Wiley, 1966.

Student, K. R. Supervisory influence and work-group performance. Journal of Applied Psychology, 1968, 52, 188-194.

Warren, D. I. Power, visibility, and conformity in formal organizations. American Sociological Review, 1968, 33, 951-970.

Weinstein, A. G. & Holzbach, R. L. Studies in attributed social power and managerial performance. Working paper, Canisius College, 1976.

Table 1

Means, Standard Deviations, and t-values for Differences in Power Variables and Performance in Phase One Sub-groups Moderated by Job Climate

	Job Challenge & Variety (med=3.49)					Role Ambiguity (med=2.88)					Perceived Participation (med=3.28)				
	Low(n=39)		High(n=40)			Low(n=39)		High(n=41)			Low(n=38)		High(n=40)		
Variables	Mean	SD	Mean	SD	t	Mean	SD	Mean	SD	t	Mean	SD	Mean	SD	t
Power															
Reward	4.33	.91	4.69	1.24	1.36	4.86	1.12	4.07	1.11	2.91**	3.98	.96	5.04	.99	4.42**
Coercive	3.73	.89	3.91	.96	.81	3.89	.97	3.74	.89	.67	3.78	.96	3.87	.90	.42
Legitimate	4.95	.80	5.22	.84	1.40	5.18	.92	4.97	.71	1.07	4.92	.72	5.24	.89	1.65
Referent	4.90	1.16	5.30	1.38	1.31	5.46	1.27	4.62	1.27	2.60**	4.70	1.11	5.48	1.33	2.64**
Expert	5.13	1.29	5.51	1.44	1.16	5.58	1.45	4.98	1.31	1.83	4.93	1.24	5.69	1.40	2.40*
Performance															
Efficiency & Timeliness	2.32	.56	2.35	.55	.20	2.41	.52	2.23	.59	1.41	2.26	.62	2.39	.45	1.05

* $p < .05$

** $p < .01$

Table 2

Means, Standard Deviations, and t-values for Differences in Power Variables and Performance in Phase Two Sub-groups Moderated by Job Climate

	Job Challenge & Variety (med=3.49)					Role Ambiguity (med=2.88)					Perceived Participation (med=3.28)				
	Low(n=39)		High(n=40)			Low(n=39)		High(n=41)			Low(n=38)		High(n=40)		
Variables	Mean	SD	Mean	SD	t	Mean	SD	Mean	SD	t	Mean	SD	Mean	SD	t
Power															
Reward	4.11	1.19	4.16	1.57	.14	4.44	1.33	3.85	1.40	1.89	3.96	1.29	4.35	1.49	1.19
Coercive	3.64	.96	3.72	1.27	.34	3.68	1.16	3.62	1.16	.24	3.67	1.06	3.68	1.21	.05
Legitimate	4.67	1.01	5.02	1.11	1.44	5.21	1.03	4.50	.98	3.13**	4.81	1.01	4.89	1.16	.30
Referent	4.66	1.33	5.07	1.42	1.31	5.28	1.27	4.47	1.37	2.72**	4.71	1.42	5.05	1.34	1.07
Expert	4.80	1.47	5.24	1.51	1.33	5.30	1.43	4.76	1.51	1.63	4.97	1.46	5.15	1.50	.55
Performance															
Efficiency & Timeliness	2.44	.56	2.33	.56	.76	2.43	.53	2.31	.60	.88	2.35	.60	2.40	.52	.41

**p < .01

Table 3

Static Correlations Between Power Variables and Performance in Sub-groups Moderated by Level of Job Challenge and Variety

Power Variables	Phase One			Phase Two		
	Low	High	Z Dif.	Low	High	Z Dif.
Reward	.33*	.15	.192	.23	.06	.174
Legitimate	.48**	.13	.392*	.08	.11	-.030
Referent	.16	.17	-.010	.33*	.20	.140
Expert	.21	.35*	-.152	.40**	.09	.333

Table 4

Static Correlations Between Power Variables and Performance in Sub-groups Moderated by Level of Role Ambiguity

Power Variables	Phase One			Phase Two		
	Low	High	Z Dif.	Low	High	Z Dif.
Reward	.16	.25	.094	.03	.20	.173
Legitimate	.23	.38*	.166	.00	.15	.151
Referent	.21	.08	-.133	.13	.34*	.219
Expert	.26	.27	.011	.11	.33*	.232

Table 5

Static Correlations Between Power Variables and Performance in Sub-groups Moderated By Level of Perceived Participation

Power Variables	Phase One				Phase Two			
	Low	High	Z	Dif.	Low	High	Z	Dif.
Reward	.29	.04		.259	.27	-.03		.307
Legitimate	.39*	.18		.230	.06	.11		-.050
Referent	.15	.09		.061	.35*	.13		.235
Expert	.37*	.10		.288	.30*	.12		.189

Table 6

Dynamic Correlations Between Power Variables At Phase One and Performance at Phase Two in Sub-groups Moderated By Level of Job Challenge & Variety

Power Variables	Low	High	Z	Dif.
Reward	.30*	.11		.199
Legitimate	.40**	-.17		.595**
Referent	.31*	.19		.128
Expert	.33*	.15		.192

Table 7

Dynamic Correlations Between Power Variables at Phase One and Performance at Phase Two in Sub-groups Moderated By Level of Role Ambiguity

Power Variables	Low	High	Z Dif.
Reward	.05	.26	.216
Legitimate	-.12	.29	.419*
Referent	.28	.14	-.147
Expert	.11	.31*	.210

Table 8

Dynamic Correlations Between Power Variables at Phase One and Performance at Phase Two in Sub-groups Moderated By Level of Perceived Participation

Power Variables	Low	High	Z Dif.
Reward	.27	.07	.207
Legitimate	.25	-.10	.356
Referent	.18	.27	-.095
Expert	.22	.20	.021